

Overall Mission

Hosted by the University of Michigan's School of Natural Resources and Environment, CILER was established in 1989 as a center of excellence that serves as a focal point for collaborative research between the National Oceanic and Atmospheric Administration (NOAA) and universities around the Great Lakes region. Research focuses on improving scientific understanding and the prediction of key physical, chemical, and biological processes in order to facilitate the restoration, protection, and management of natural resources. The Institute also trains new and upcoming researchers through postdoctoral and undergraduate and graduate student fellowships.

Our University Partners

The following research institutions are consortium partners within CILER that collaborate with NOAA on the operation of research programs.

Michigan State University
Grand Valley State University
University of Toledo
Ohio State University
University of Wisconsin
Penn State University
University of Illinois - Urbana-Champaign
University of Minnesota-Duluth
University of New York-Stonybrook

Research Themes

A Council of Fellows comprised of scientists from NOAA and Sea Grant Directors provide research advice for the following themes:

Great Lakes Forecasting

Improve forecasting of physical and ecological processes in the Great Lakes.

Invasive Species

Monitor and manage impacts of invasive species in the Great Lakes.

Observing Systems

Improve access to historical and real-time climatic, meteorological, chemical, biological, and geological data about the Great Lakes ecosystem.

Protection and Restoration of Resources

Promote and improve the ecological integrity, conservation, and preservation of natural resources in the Great Lakes.

Integrated Assessment

Promote interdisciplinary research that incorporates socioeconomic issues as a guide for policy and resource use.

Education and Outreach

Disseminate research data to the general public, highlight research initiatives in the region, and provide education and training opportunities for students and teachers.

Overall funding through NOAA and other agencies has increased over 10-fold since 1991. Since 2007 alone, CILER has supported over 85 project grants that total over \$13 million in research funding.



New generation environmental monitoring buoy developed in cooperation with GLOS and the University of Michigan's Marine Hydrodynamics Laboratories will improve data collection in support of Great Lakes restoration efforts.

Highlights

Great Lakes Restoration Initiative

This initiative provided approximately \$4 million in FY10 through NOAA and the cooperative institute to support research efforts that improve and update a Great Lakes Aquatic Non-Indigenous Species Information System database, improve water quality observations and beach forecasting, develop a Great Lakes observing system network to enhance tributary monitoring and support restoration efforts within Areas of Concern, continue monitoring the status and trends of Great Lakes benthic population biodiversity, and provide program support for the initiative.



Managing Impacts of Multiple Stressors in Coastal Ecosystems

Saginaw Bay, Michigan has a long history of anthropogenic impacts that have compromised many of the ecosystem services that humans value. Current stressors influencing the Bay include excess nutrient inputs, invasive species, and climate change effects. The combined effect of these stressors has resulted in nuisance and harmful algae production and changed the balance of the recreational fishery. The goal of

this project is to develop an interactive working relationship with resource managers in the Saginaw Bay watershed and conduct research that will provide guidance to address the most important management concerns.



For more information:
<http://ciler.snre.umich.edu/>

Great Lakes Ocean Sciences Bowl

As a charter regional site, CILER has coordinated this program for high school teams from around Michigan and Ohio since the inception of the National Ocean Sciences Bowl in 1998. Winners at the regional competition advance to national-level finals, where top finishers enjoy international and national excursions that provide practical ocean and freshwater science education and training. One trip involves a cruise aboard a Great Lakes research vessel with NOAA and CILER scientists.



Great Lakes Student Fellowships

Since 1999, the cooperative institute has hosted undergraduate and graduate students from about 50 different U.S. and international colleges and universities to participate in research projects with NOAA and CILER scientists. This highly competitive program has provided a mechanism for students to work and train with prominent Great Lakes research scientists and has enhanced their future research careers.